

sub B1

10.(Amended) A method for treating diesel exhaust gases comprising:

positioning an oxidation catalyst in an exhaust gas passage of a diesel engine, said oxidation catalyst comprising platinum and a support material comprising zirconia-stabilized silica;

providing a particulate filter downstream of said oxidation catalyst;

exposing said oxidation catalyst to diesel exhaust gas containing NO such that at least a portion of said NO contained in said exhaust gas is converted to NO₂ at a temperature between about 175°C to 250°C; and

passing said NO₂ through said particulate filter in an amount sufficient to oxidize particulate matter trapped on said filter.

Please cancel claim 21.

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24.(Amended) A method for treating diesel exhaust gases comprising:

positioning an oxidation catalyst in an exhaust gas passage of a diesel engine, said oxidation catalyst comprising platinum and a support material comprising zirconia-stabilized silica;

providing a particulate filter in combination with said oxidation catalyst;

exposing said oxidation catalyst to diesel exhaust gas containing NO such that at least a portion of said NO contained in said exhaust gas is converted to NO₂ at a temperature between about 175°C to 250°C; and

passing said NO₂ through said particulate filter in an amount sufficient to oxidize particulate matter trapped on said filter.

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25. (Amended) A diesel exhaust gas treatment system comprising:
a particulate filter for receiving diesel exhaust gas from a diesel engine;
an oxidation catalyst for converting at least a portion of NO contained in said diesel exhaust gas to NO₂ at a temperature between about 175°C to 250°C, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica; wherein said oxidation catalyst is impregnated in said particulate filter.
26. (Amended) A diesel exhaust gas treatment system comprising:
a first oxidation catalyst for converting at least a portion of NO contained in said diesel exhaust gas to NO₂ at a temperature of between about 175°C to 250°C, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica; and
a second oxidation catalyst different from said first oxidation catalyst; wherein said first and second oxidation catalyst are positioned in combination in the exhaust gas passage of a diesel engine.

REMARKS

In the first Office Action, claims 1-4, 10, 17, 18, 23, 24, and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Murachi et al. (U.S. 5,746,989) in view of Manson (U.S. 6,248,689). Murachi et al. teach a method for purifying diesel exhaust gas in which NO is oxidized into NO₂ using a catalyst comprising platinum or palladium attached to an alumina support. The Examiner acknowledges that Murachi et al. fail to teach the use of a zirconia-silica support material as claimed, but asserts that it would have been obvious to use such a support in Murachi et al. in view of Manson, who teach a self-regenerating oxidation catalyst formed from a solution of